OT15 'd PCT/PTO 3 0 DEC 2004 8017-1156

IN THE U.S. PATENT AND TRADEMARK OFFICE

In re application of

Akira USUI et al.

Conf.

Application No. NEW NATIONAL PHASE

Group

Filed December 30, 2004

Examiner

GROUP III NITRIDE SEMICONDUCTOR SUBSTRATE FOR PROCESS FOR PRODUCTION THEREOF

INFORMATION DISCLOSURE STATEMENT (SUBMISSION CONCURRENT WITH THE FILING OF A NEW PATENT APPLICATION)

Assistant Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

December 30, 2004

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, and in fulfillment of the duty of disclosure under 37 C.F.R. § 1.56, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications, or other information submitted for consideration by the Office are listed on PTO-1449, attached hereto.

II. COPIES

| Copies | of | the | U.S. | patents | or pul | olications | are | not | submitted |
|--------|-------|-------|--------|---------|--------|------------|-------|-----|------------|
| since | the | USPT | O has | waived | their | submission | ı for | app | plications |
| filed | afte: | r Jun | ıe 30, | 2003. | | ı | | | |

- Submitted herewith is a legible copy of (i) each foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.
- This application is a National Phase of a PCT application. Some or all of the documents listed on the PTO-1449 are not enclosed because they were cited in the International Search Report and copies should have been forwarded from the International Search Authority pursuant to the trilateral agreement between the USPTO, EPO and JPO, or they are U.S. patents or U.S. published applications. If copies are needed, please contact the undersigned.

OT15 Ret No. 8017-1156 PCT/PTO .3 0 DEC 2004

III. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

a. DOCUMENTS IN THE ENGLISH LANGUAGE

The attached non U.S. patents, non U.S. patent application publications, foreign publications, or other information in the English language do not require a statement of relevancy.

b. DOCUMENTS NOT IN THE ENGLISH LANGUAGE

A concise explanation of the relevance of all patents, publications, or other information listed that is not in the English language is as follows:

English patent abstracts have been provided for the Japanese patents.

An English language version of the search report or action that indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. See MPEP 609(A)(3).

d.

OTHER

The following additional information is provided for the Examiner's consideration.

FEES

This Information Disclosure Statement is being filed concurrently with the filing of a new patent application; therefore, no fee is required.

If The Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned.

Respectfully submitted,

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| | IN AN APPLICATION | Applicant: Akira USUI et al. | | | | | | |
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| | | U.S. PATEN | T DOCUMENTS | | | | | |
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| Examiner | Document Number | Date | Country | Class | Subclas | s Trans | slation | |
| Initial | | | | | | Yes | No | |
| | 1 271 627 | 1/2/2003 | EUROPE | | | | <u> </u> | |
| | 63-188983 10-312971 | 8/4/1988 | JAPAN | | | <u> </u> | | |
| | 2000-012900 | 11/24/1998 | JAPAN | | | X | ļ | |
| | 2001-223165 | 1/14/2000 | JAPAN | | | X | ļ | |
| | 2001-223165 | 8/17/2001 | JAPAN | | | X | <u> </u> | |
| | 2002-050585 | 10/12/2001 | JAPAN | | | X | <u> </u> | |
| | 2002-050586 | 2/15/2002 | JAPAN | | | <u> </u> | ļ | |
| | 2002-030366 | 2/15/2002 | JAPAN | | | <u> </u> | ļ | |
| | 2002-343718 | 11/29/2002 6/27/2003 | JAPAN | | | X | <u> </u> | |
| 1 | | | JAPAN | | . | X | <u> </u> | |
| | By Tsvetanka S. Zheleva et al., | | thor, Title, Date, Pertine | | | .ma Niidai | | |
| | Structures", MRS Internet J. Nitr | ide Semicond. | Res. 4S1, G3.38, 1999, p. | aterar Grow ages 2-7. | ui oi Gaiii | אווו ואונרונ | эe | |
| | By Ok-Hyun Nam et al., "Lateral | Epitaxy of Low | Defect Density GaN Laye | ers Via Orga | anometalli | Vapor | - | |
| | Phase Epitaxy", Appl. Phys. Lett | t., 71 (18), Nove | ember 3, 1997, pages 1-4 | | | - | | |
| | By Masaru Kuramoto et al., "Room-Temperature Continuous-Wave Operation of InGaN Multi-Quantum- | | | | | | | |
| | Well Laser Diodes Grown on an n-GaN Substrate with a Backside n-Contact", Japanese Journal of Applied Physics, Vol. 38, No. 2B, February 15, 1999, pages 1-4. | | | | | | | |
| . | By Michael Kelly et al., "Large F | ree-Standing G | aN Substrates by Hydride | | | | ser- | |
| | Induced Liftoff", Japanese Journ | | | | | | | |

EXAMINER: DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

^{*} English language abstract provided for the Examiner's convenience